

Report on the Ukrainian Urgent Energy Assistance Project January-March 2000

The Urgent Energy Assistance package satisfies two major categories of energy efficiency needs in Ukraine. The first is the need to deliver essential energy security and energy-efficiency tools and methods for short-term relief to Ukrainian enterprises and agencies. The second need is for assistance to American firms and bilateral and international financial institutions to identify and prepare project investments with short- and medium-term payback. Energy savings will reduce pressure on electric power supply systems including fossil fuel imports to generate power and will thus facilitate closing the Chernobyl power station, a major goal of both the U.S. and Ukrainian governments.

These efforts are managed for the Department of Energy and the Agency for International Development by the Pacific Northwest National Laboratory. PNNL provides support for local capacity building by utilizing, to the extent possible, the assistance of ARENA-ECO, the Ukrainian Agency for Rational Energy Use and Ecology.

HIGHLIGHTS

- The World Bank's board of directors approved the Kyiv Public Buildings Energy Efficiency Project (formerly known as KIBA) in January 2000. The first tenders under this project were also signed this quarter.
- The Agency for International Development and Department of Energy approved \$850,000 in follow-on funding for the Urgent Energy Assistance Project. Secretary of Energy Bill Richardson announced this new funding in Kyiv in February.
- Gostomel Glass Plant and UkrEsco signed an agreement to finance new, high efficiency compressors at Gostomel and begin tender procedures.

ACTIVITY DETAILS

Kyiv Public Buildings Energy Efficiency Project (formerly KIBA)

As reported in the previous quarterly report, the World Bank's board of directors approved an \$18.29 million loan for this project on January 27, 2000. This is a major step in the project's development. The total project is valued at just over \$30 million and includes substantial contributions from the Kyiv City Administration. For more information on this loan approval, please check our web site at www.pnl.gov/aisu or the World Bank web site at <http://wbln0018.worldbank.org/news/pressrelease.nsf/15ed41e1e444043d8525678c005860ff/98ff9904ec36ddf885256873006a97cf?OpenDocument>.

Also in this quarter, the Kyiv City State Administration approved the budget for funding the Project Implementation Unit (PIU) and transferred money to the PIU for energy audits, heat substation designwork and installation of heat metering equipment. The PIU awarded and signed contracts under its first tender which covered energy audits and heat substation design for 120 buildings. The PIU also began to prepare tender documentation on procurement and installation of equipment for the first group of 30 buildings.

PNNL and ARENA-ECO completed their contribution to the World Bank staff appraisal project in 1998; the World Bank, Kyiv City Administration and Ukrainian Cabinet of Ministers have approved all of PNNL's contribution reports.

Industrial Energy Efficiency Project

Rosava Tire Plant: The project team continued work on a large project at Rosava Tire Plant. ARENA-ECO, Tysak Engineering and PNNL completed an energy audit report and presented the findings to the General Director and other top management at Rosava in February. The audit identified \$4 million worth of cost-effective energy efficiency improvements including

replacing steam traps, recovering heat, improving the compressed air system and installing more efficient lighting. The plant plans to finance the majority of the smaller measures internally, though it may seek external financing for some of the larger measures such as heat recovery. Rosava's management will make a final decision on which measures to pursue in the near future. IRE completed a business and marketing report; this report will help us attract and structure financing for the energy efficiency measures that need external financing. IRE also completed accounting work to prepare an appraisal of Rosava's financial position and will issue a report on this in the second quarter. UkrEsco is very interested in providing financing for this project to Rosava; Rosava and UkrEsco have scheduled a meeting for early April to decide whether to enter into a formal agreement.

Gostomel Glass Plant: Gostomel and UkrEsco have signed an agreement to finance between \$350,000 and \$380,000 worth of energy efficiency compressors. UkrEsco is currently organizing a tender for the equipment. Gostomel is also moving forward with an approved deal for \$3.5 million in financing from the Western NIS Enterprise Fund. Under the deal, Western NIS would acquire a stake in Gostomel, and the capital Gostomel receives from this sale will go toward modernization and efficiency improvements of its largest glass furnace. Industrial Real Estate (IRE), under contract to PNNL, helped prepare all financial and legal documents necessary for the UkrEsco deal, and appraised the value of Gostomel's collateral under this agreement. PNNL also organized a meeting between several top managers at Gostomel, Tom Broderick (USAID), Sergey Bezv (State Committee on Energy Conservation), ARENA-ECO and IRE so that USAID and the State Committee could learn more about the industrial energy efficiency project in general, and the project at Gostomel more specifically.

Zaporizhia Abrasives: PNNL, ARENA-ECO and IRE representatives met with the General Manager of Brinkford, the majority owner of Zaporizhia Abrasives. He conveyed Brinkford's strong commitment to implementing EE measures identified in ARENA-ECO's Energy Audit. Brinkford and Zaporizhia Abrasives are still in the process of determining exactly which measures will be implemented, in what order, and what measures if any will require external financing. IRE has remained in contact with Brinkford and UkrEsco concerning this project. UkrEsco has expressed their interest in working with Zaporizhia Abrasives based on the Energy Audit report of Arena-Eco.

Stalkanat: IRE remains in frequent communication with Stalkanat management and majority owners (Sigma Group and Davenport Management). The Company is meeting its long-term debt obligations and working with other creditors to restructure short-term debt due in 2000. The Company is profitable and has introduced higher-quality wire products. UkrEsco maintains Stalkanat on their list of investment projects but all sides must await the reduction and/or restructuring of debt due this year. It is anticipated that later this year, the Company will be in a position to seek new long-term debt to implement its energy efficiency projects with UkrEsco.

PNNL, ARENA-ECO and IRE also began assessing potential new plants to include in the industrial energy efficiency project. Under the new funding, the industrial team plans to prepare documentation on 2 small and 2 large industrial energy efficiency projects. For the large projects, PNNL and its team plan to work with existing investors which plan to make new financing available to the companies they own or work with. This should simplify the process of identifying plants and helping them find financiers. The project team also met with several plants with potentially small projects, including Kyiv bread factories, Khimvolokno (Chernihiv), and others.

Kharkiv District Heating Project

The Kharkiv District Heating Project is an effort to prepare a \$173 million investment package for World Bank financing. When implemented, the project will save over \$35 million per year. The project will involve installation of upgraded turbines from Turboatom, boilers, controls, piping and insulation. (Turboatom is the Ukrainian firm that turned down a lucrative Iranian contract for turbines to be installed in a nuclear power plant.)

In this quarter, ARENA-ECO collected and analyzed data from Kharkivteploenergo and Kharkiv District Heating Networks. Specifically, ARENA-ECO:

- Prepared a baseline assessment of energy flow and system loads for the Kharkiv district heating system operated by Kharkiv District Heating Networks.
- Prepared a comprehensive financial evaluation of Kharkiv District Heating Networks, including converting financial statements to accrual-based international standards.
- Collected data to assess the financial situation at Kharkivteploenergo.
- Organized an inter-agency meeting at the State Committee on Energy Conservation on developing a strategy for further improvements in the Kharkiv district heating system.
- Provided assistance to Kharkiv District Heating Networks and Kharkivteploenergo in preparation for meetings and potential collaboration with the World Bank, the U.S. Trade and Development Agency and the U.S. Agency for International Assistance.

Like most Ukrainian district heating companies, Kharkiv district heating companies are not currently profitable, although the level of Kharkiv District Heating Networks' losses and debts has declined significantly in the past year. This improvement in financial position is partly due to the Kharkiv regional administration's emphasis on restructuring this sector to make it viable in the long term. ARENA-ECO and PNNL have been advising the Kharkiv regional administration on the district heating sector this since 1998.

Private Sector Support: Efficient Windows

In 1997 and 1998, PNNL assisted the U.S. firm AIDCO to prepare a market and business operations plan for its new window manufacturing plant. The plant, located in Smila, Cherkassy Region, is owned by a joint venture called UKR-West Window (UWW) Ltd. UWW survived the economic turmoil in Ukraine caused by the Russian financial crisis in August 1998. In spite of the Ukrainian Hryvna devaluation by almost two and one-half times versus the U.S. Dollar the company was able to increase its sales from \$202,000 in FY1998 to \$420,000 in FY1999. These values are in U.S. Dollars and include 20% VAT. This doubling of sales took place in a very competitive environment in Ukraine, since many of the European companies that were in Russia entered the Ukrainian market when problems developed in Russia.

UWW plans to double its sales in 2000 by setting up a series of retail building material shops, initially in Kyiv. Increasing sales is important because currently, the plant is only running at 10% of production capacity. UWW is also pursuing sales to large construction companies that are building apartments, especially in Kyiv.

PNNL has also helped link UWW with UkrEsco. UkrEsco plans to provide financing for a small project to increase the efficiency of UWW's plant (primarily through insulation of the building that houses the plant).